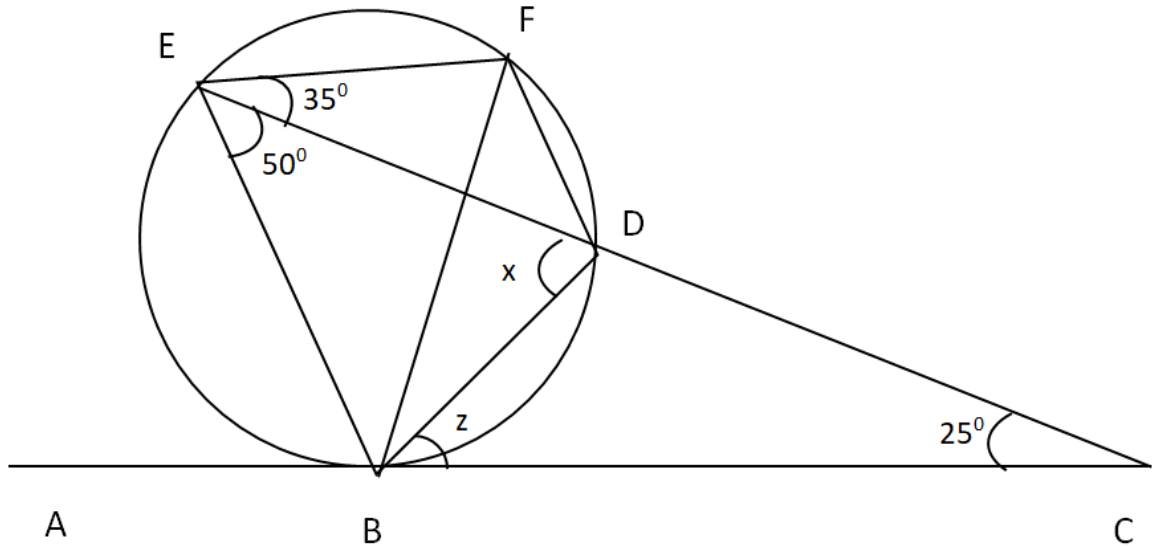


TANGENTS AND CHORDS OF A CIRCLE

REVISION KIT

In the figure below, ABC is a tangent at B and CDE is a straight line.

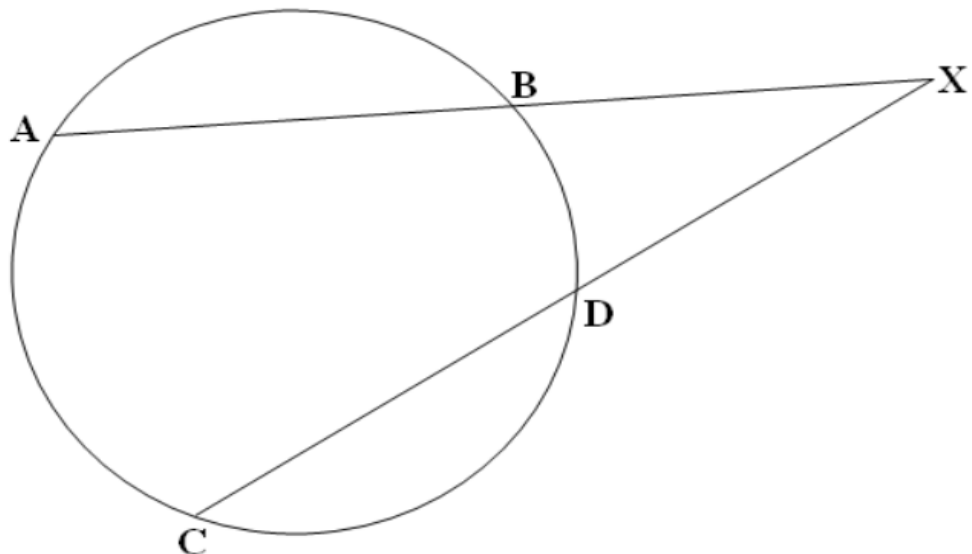
$$\angle BED = 50^\circ, \angle DEF = 35^\circ \text{ and } \angle ECB = 25^\circ$$



Calculate the values of x and z .

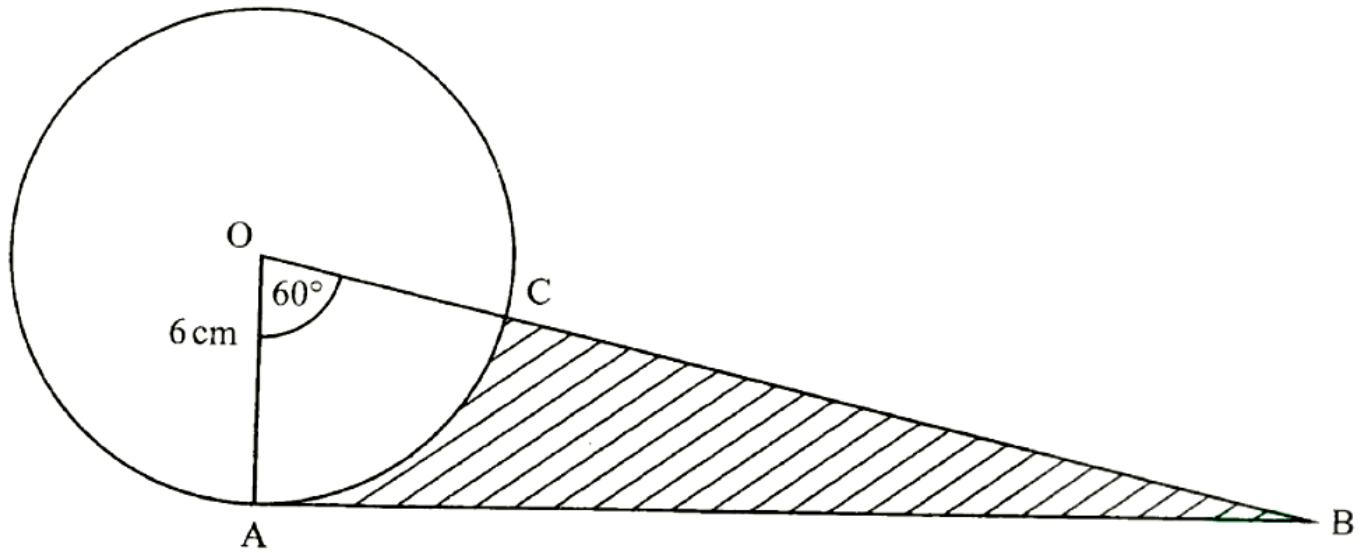
(2marks)

CHORDS AB AND CD OF A CIRCLE MEET AT X .



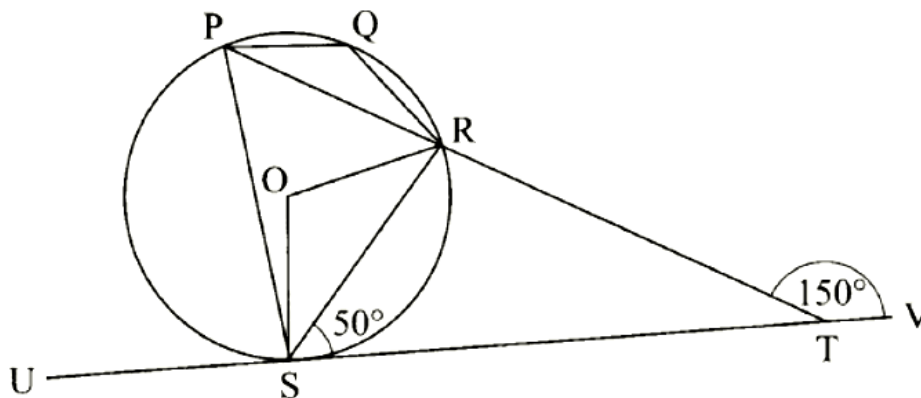
IF $AB = 8\text{CM}$, $BX = 5\text{CM}$ AND $DX = 6$. CALCULATE THE LENGTH OF CHORD CD . (3MKS)

In the figure below, AB is a tangent to the circle, centre O and radius 6 cm. The arc AC subtends an angle of 60° at the centre of the circle.



Calculate the area of the shaded region, correct to 1 decimal place.

In the figure below, P, Q, R and S are points on the circle with centre O. PRT and USTV are straight lines. Line USTV is a tangent to the circle at S. $\angle RST = 50^\circ$ and $\angle RTV = 150^\circ$.



a) Calculate the size of

i) $\angle QRS$

ii) $\angle USP$

iii) $\angle PQR$

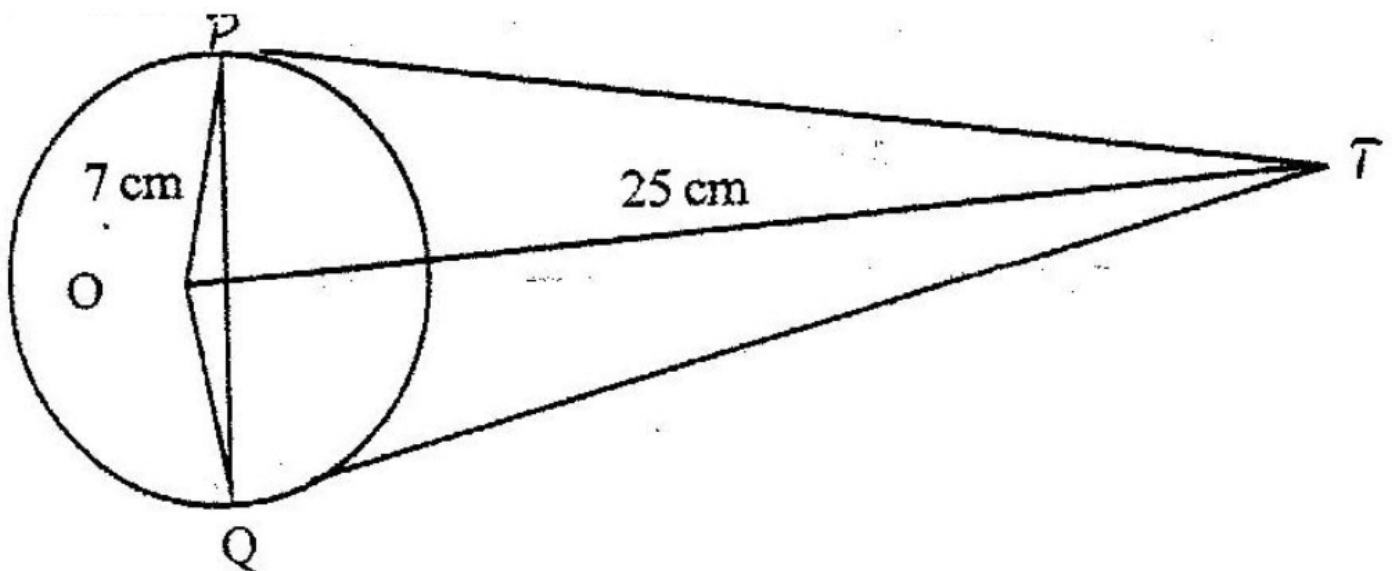
b) Given that $RT = 7$ cm and $ST = 9$ cm, calculate to 3 significant figures

i) Length of line PR

ii) The radius of the circle

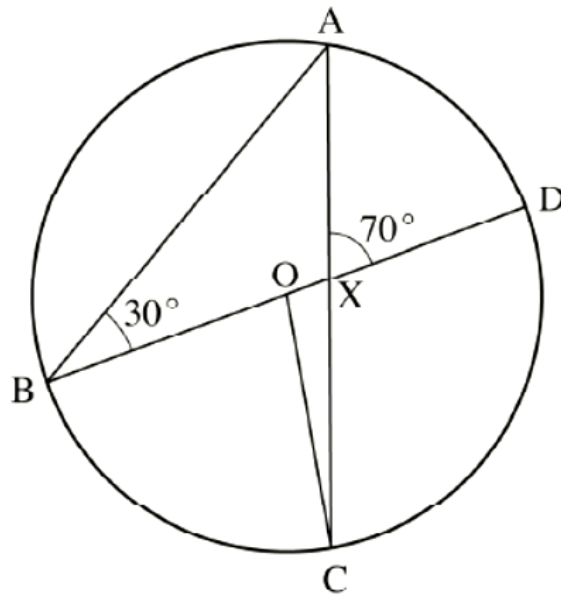
An arc 11 cm long, subtends an angle of 70° at the centre of a circle. Calculate the length, correct to one decimal place, of a chord that subtends an angle of 90° at the centre of the same circle.

The figure below shows a circle, centre, O of radius 7cm. TP and TQ are tangents to the circle at points P and Q respectively. $OT = 25$ cm.



Calculate the length of the chord PQ

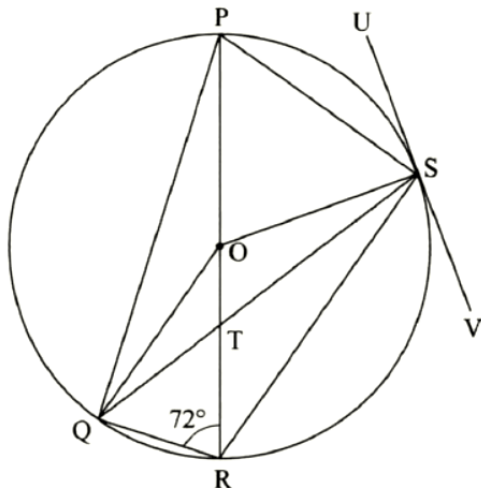
In the figure below, BOD is the diameter of the circle centre O. Angle ABD = 30° and angle AXD = 70° .



Determine the size of :

- Reflex angle BOC
- angle ACO.

In the figure below, PR is a diameter of the circle center O. Points P, Q, R and S are on the circumference of the circle. Angle PRQ = 72° , QS = QP and line USV is tangent to the circle at S.



Giving reasons, Calculate the size of

- $\angle QPR$
- $\angle PQS$
- $\angle OQS$
- $\angle RTS$
- $\angle RSV$